

Production of Syngas For Fuel Cells Using Multiple Catalyst Configuration

Abstract

Method and equipment for converting hydrocarbon fuel to a mixture of hydrogen and carbon monoxide through catalytic partial oxidation. The catalysts can include a combination of both an oxidation catalyst and a steam reforming catalyst, though no water is used in the process and catalyst contact time is short. Thermal management of the process in the pre-reaction and post reaction zones of the reactor enhance yields and reduce carbon deposition.